

IN THE CLAIMS

Please cancel claims 1-8, 10-12, 24-25, 50-53, 56-58, and 71-80 without prejudice.

Please amend claims 9, 13, and 54 as follows below.

Please add new claims 81-96 that follow below.

MARKED UP CLAIMS

1 1-8. (Cancelled)

1 9. (Amended Once) ~~A The fiber optic module of claim 1~~
2 ~~wherein comprising:~~
3 a pull-actuator to disengage and withdraw the fiber optic
4 module from a cage assembly, the pull-actuator includes
5 a pull-tab,
6 a shaft coupled to the pull tab at a first end, and
7 an opening at a second end of the shaft to engage a
8 first end of a pivot arm;
9 and
10 one or more electro-optic transducers to convert optical
11 signals into electrical signals or electrical signals into
12 optical signals.

1 10-12. (Cancelled)

1 13. (Amended Once) A ~~The~~ fiber optic module ~~of claim 1~~
2 ~~further~~ comprising:
3 a pull-actuator to disengage and withdraw the fiber optic
4 module from a cage assembly;
5 a pivot-arm actuator, pivotally coupled to the fiber
6 optic module, to release the fiber optic module from the cage
7 assembly when the pull-actuator is pulled; and
8 one or more electro-optic transducers to convert optical
9 signals into electrical signals or electrical signals into
10 optical signals.

1 14. (Original) The fiber optic module of claim 13 wherein
2 the pivot-arm actuator further includes,
3 a pivoting pin to rotationally couple the pivot-arm
4 actuator to the fiber optic module.

1 15. (Original) The fiber optic module of claim 13 wherein
2 the pivot-arm actuator includes
3 a first engaging end to engage to the cage assembly,
4 a second engaging end to engage to the pull-
5 actuator, and
6 a shaft coupling to the first and second engaging
7 ends.

1 16. (Original) The fiber optic module of claim 15 wherein

2 the first engaging end includes a keeper to engage the
3 fiber optic module to the cage assembly.

1 17. (Original) The fiber optic module of claim 15 wherein
2 the first engaging end includes a latch to engage the
3 fiber optic module to the cage assembly.

1 18. (Original) The fiber optic module of claim 15 wherein
2 the second engaging end includes a keeper to engage the
3 pivot-arm actuator to the pull-actuator.

1 19. (Original) The fiber optic module of claim 15 wherein
2 the second engaging end includes a latch to engage the
3 pivot-arm actuator to the pull-actuator.

1 20. (Original) The fiber optic module of claim 15 wherein
2 the second engaging end includes a ramped sliding surface
3 to slide and cause the pivot-arm actuator to rotate when the
4 pull-actuator is pulled.

1 21. (Original) The fiber optic module of claim 13 further
2 comprising:
3 a spring to cause the pivot-arm actuator to return to its
4 initial position when the pulling force on the pull-actuator
5 is removed.

1 22. (Original) The fiber optic module of claim 21 wherein

2 the spring is a leaf spring and part of the pivot-arm
3 actuator.

1 23. (Original) The fiber optic module of claim 21 wherein
2 the spring causes the pull-actuator to return to its
3 initial position when the pulling force on the pull-actuator
4 is removed.

1 24-53. (Cancelled)

1 54. (Amended Once) ~~A The fiber optic module of claim 50~~
2 ~~further~~ comprising:
3 means for converting optical signals into electrical
4 signals or electrical signals into optical signals;
5 means for disengaging the fiber optic module from a cage
6 assembly by pulling a pull-actuator; and
7 means for pivotally disengaging the fiber optic module
8 from the a cage assembly when the pull-actuator is pulled.

1 55. (Original) The fiber optic module of claim 54 further
2 comprising:
3 means for coupling the pivotally disengaging means to the
4 fiber optic module.

1 56-58. (Cancelled)

1 59. (Original) A fiber optic module comprising:

2 a nose receptacle including
3 a fiber optic cable receptacle to receive one or
4 more fiber optic cable plugs,
5 a pull-actuator to release the fiber optic module
6 from a cage assembly using a pull action;
7 a pivot-arm actuator coupled to the pull-actuator,
8 the pivot-arm actuator to pivot and release a keeper from a
9 latch to release the fiber optic module in response to a pull
10 action on the pull-actuator; and
11 a printed circuit board including one or more
12 electro-optic transducers to convert optical signals into
13 electrical signals or electrical signals into optical signals.

1 60. (Original) The fiber optic module of claim 59
2 wherein,
3 the fiber optic module is a small form pluggable (SFP)
4 fiber optic module and the cage assembly is a small form
5 pluggable (SFP) cage assembly.

1 61. (Original) The fiber optic module of claim 59 further
2 comprising:
3 a housing to couple to the nose receptacle and cover the
4 printed circuit board.

1 62. (Original) The fiber optic module of claim 61
2 wherein,

3 the housing is shielded to protect the printed circuit
4 board from electromagnetic interference.

1 63. (Original) The fiber optic module of claim 59
2 wherein,
3 the pull-actuator includes one or more grooves to
4 slideably engage the nose receptacle.

1 64. (Original) The fiber optic module of claim 59
2 wherein,
3 the pull-actuator slides outward to release the fiber
4 optic module from the cage assembly.

1 65. (Original) The fiber optic module of claim 59
2 wherein,
3 the pivot-arm-actuator includes
4 a pivot pin rotationally coupled to the nose receptacle
5 at first and second ends to allow the pivot-arm actuator to
6 pivot.

1 66. (Original) The fiber optic module of claim 59 wherein
2 the nose receptacle further includes
3 a spring coupled to the pivot-arm-actuator at a first end
4 and the nose receptacle at a second end, the spring to exert a
5 force on the pivot-arm-actuator to exert a return force on the
6 pull-actuator.

1 67. (Original) The fiber optic module of claim 59
2 wherein,
3 the pull-actuator includes
4 an orientation indicator to indicate the fiber optic
5 module which the pull-actuator releases.

1 68. (Original) The fiber optic module of claim 59
2 wherein,
3 the pull-actuator includes
4 a pull-tab,
5 a shaft coupled to the pull-tab at a first end, and
6 a catch at a second end of the shaft.

1 69. (Original) The fiber optic module of claim 59
2 wherein,
3 the pull-actuator is located at a bottom side of the
4 fiber optic module.

1 70. (Original) The fiber optic module of claim 59
2 wherein,
3 the nose receptacle further includes
4 a grip to pull out on the fiber optic module.

1 71-80. (Cancelled)

1 81. (New) The fiber optic module of claim 9 wherein

2 the fiber optic module is a small form pluggable (SFP)
3 fiber optic module and the cage assembly is a small form
4 pluggable (SFP) cage assembly.

1 82. (New) The fiber optic module of claim 9 wherein
2 the pull-actuator is activated to disengage and withdraw
3 the fiber optic module by a single backward pull action.

1 83. (New) The fiber optic module of claim 9 wherein
2 the pull-actuator further includes
3 one or more grooves to slideably engage the fiber
4 optic module.

1 84. (New) The fiber optic module of claim 9 wherein
2 the fiber optic module includes one or more grooves to
3 slideably engage the pull-actuator.

1 85. (New) The fiber optic module of claim 9 wherein
2 the pull-actuator slides to disengage the fiber optic
3 module from the cage assembly.

1 86. (New) The fiber optic module of claim 9 wherein
2 the pull-actuator further includes,
3 one or more end-stops to withdraw the fiber optic
4 module as the pull-actuator is pulled.

1 87. (New) The fiber optic module of claim 9 wherein

2 the pull-actuator further includes
3 one or more end-stops to prevent the pull-actuator
4 from becoming disengaged from the fiber optic module as it is
5 pulled.

1 88. (New) The fiber optic module of claim 9 wherein
2 the pull-actuator further includes
3 an orientation indicator to indicate the fiber optic
4 module which the pull-actuator releases.

1 89. (New) The fiber optic module of claim 9 wherein
2 the pull-actuator is formed of metal.

1 90. (New) The fiber optic module of claim 9 wherein
2 the pull-actuator is formed of a plastic.

1 91. (New) The fiber optic module of claim 9 wherein
2 the pull-actuator permits arranging multiple fiber optic
3 modules in a belly-to-belly configuration without obstructing
4 adjacent pull-actuators.

1 92. (New) The fiber optic module of claim 91 wherein
2 with the belly-to-belly configuration, two pull-actuators
3 are located in proximity to each other along a common surface
4 between two fiber optic modules.

1 93. (New) The fiber optic module of claim 54 further
2 comprising:
3 means for slideably engaging the means for disengaging
4 the fiber optic module.

1 94. (New) The fiber optic module of claim 54 wherein
2 the means for disengaging also provides a means for
3 withdrawing.

1 95. (New) The fiber optic module of claim 54 further
2 comprising:
3 means for withdrawing the fiber optic module.

1 96. (New) The fiber optic module of claim 54 further
2 comprising:
3 means for indicating the fiber optic module which the
4 means for disengaging releases.